APPENDIX D.

DESCRIPTION of Forests and Working Circles, Kashmor Range.

Range.	Forest.	Area.	Boundaries.	Situation, configuration and soil.	Description of stock.	REMARKS.
Kashmor.	Jangan.	2,350—12	Bounded on the north by revenue land of deh Mangvani; on the east by revenue land of deh Kander; on the south by a public road from Dari to Gublo and a dhand; and on the west by revenue lands of dehs Jangan and Mangvani.	About 2 miles north of Dari and 3 miles from the right bank of the river. Configuration as usual. Soil, a sandy loam. On the protected side of the loop band the surface is covered with kalar. The part of the forest between the two bunds is sufficiently inundated by a sluice in the main band.	The stock consists of kandi and lai, both dense and flourishing in the southern compartments between the two bands. In the northern compartments the crop is poor, and blanks are seen extending from the centre of the forest to the north-west. The compartments bordering on the old band on the south and west are fairly well stocked with mature stock, the parts coming under water directly from the Unar wah, about one-half of the area receives water. Density: Varies from 1 to ·8. Quality: Indifferent. Imature kandi and lai stand in the southern irrigated half of the forest. Reproduction: Nil on the protected side of the loop band. Between the two bands water is said to stand to a height of 5′ or 6′ so that seedlings are drowned yearly.	The forest is worked for Sukkur *via* the river. Two openings are necessary in the loop band to irrigate the part of the forest on its protected side.
	Daho.	1,358—8.	[illegible]d on the north [illegible]nue land of [illegible]air wah; on the [illegible]t by revenue lands of dehs Ghora Ghut and Daho; on the south by revenue land of deh Daho; and on the west by revenue lands of dehs Daho and Khair wah.	About 4 miles to the north-east of the last described forest and 3 miles from the right bank of the river. The soil is of the usual composition, with a rather sandy sub-soil.	The crop is a mixed one of kandi and lai, fairly dense and evenly distributed. Much of the kandi are pollard shoots grown since the forest was reserved in 1895. Lai is rather overmature and decaying. Density: ·8. Quality: Exploitable for fuel. Reproduction: Outside the closed coupes nil. A coupe of 1895-96 is well re-stocked with kandi and lai coppice, but in both this and a coupe of 1898-99 there is a paucity of seedlings.	The forest is worked for Sukkur *via* the river. Two openings in the band will irrigate the part of the forest on its protected side.
	Sunderani (right bank).	3,491—36.	Bounded on the north by revenue lands of dehs Sunderani and Lakhan; on the east by revenue land of deh Lakhan; and on the south and west by the river Indus.	On the right bank of the river about 4 miles to the south-east of Gublo. The soil varies from pure sand on the new kacha to sandy loam on the stable area. The forest is inundated in greater part in ordinary floods except on high levels in the vicinity of Gots Maso Waso and Pario Lakhan. Percolation goes a great way there.	The forest is in two parts; one part on the right bank, and a second part on the left bank of the river. Bahan and lai, the latter immature, constitute the growing species. They occur sometimes mixed, but often unmixed on separate areas. About one-half of the stable area has been felled over and closed for reproduction. The sandy kacha in the south is bare. Density: ·7. Quality: Immature. Bahan is mature but hollow. Lai will not be fit for cutting for the next 10 years. Reproduction: Fair in the coupe of 1896-97. Bahan has coppiced well, and babul and kandi seedlings are fairly numerous, outside the closed parts seedlings of babul, kandi and bahan are to be seen cropping up here and there.	
	Sunderani (left bank).	377—8.	Bounded on the north and west by the river Indus; on the east and south by revenue land of deh Sunderani.	On the left bank of the river and north of the railway at Ghotki. The soil is largely sandy, especially of the new land thrown up by the river.	Lai immature, is the principal species in this part. Scattered mature bahan and about a dozen babul trees are to be seen in the vicinity of Got Baksho. A new kacha extends away to the north-east, covered with first crops of lai. Density:—·9. Quality: Immature. The forest being naturally irrigated, the crops are well grown and thriving. Reproduction of lai generally. Kandi has not begun to show itself to any extent.	

Range.	Forest.	Area.	Boundaries.	Situation, configuration and soil.	Description of stock.	Remarks.
Kashmor.	Old Gublo.	4,093—4.	Bounded on the north by a part of Bahawalpur territory; on the east and south by the river Indus; and on the west by revenue land of deh Kalu Wadi.	On the right bank of the Indus soil a sandy alluvium. The forest was up to quite recently well watered by the river, but now that the latter has changed its course more to the south, parts on the west and north-east stand high and dry. The dhand running through helps to bring a large part under water yearly, but it is fast silting up.	There is a large extent of kacha land on the east and south, bare for the most part, except on the south where lai 2 or 3 years old stands. The paka or stable area remaining has the four principal species represented on it, sometimes growing together, but oftener on separate plots. Kandi, however, is gaining ground and will be the crop of the future. Babul is mostly found on the south; one broad belt extends from the south of compartment E1 to the dhand in compartment E2 and then along the bank of the dhand in compartment F3. Bahan is generally poor. Kandi is successful everywhere though much of it is immature. Young babul from 3 to 6 years old stands dead all over the forest, due it is said, to the severe frost of January 1900. Sar grass is plentiful, especially in compartments F3, G3 and H3, where it is a menace of fire to the young crops of kandi springing up. Average density: ·6. Quality: Babul well grown and exploitable; bahan, poor; kandi and lai, immature. Reproduction: Satisfactory on the whole. Parts not flooded recently show little reproduction. Compartments F3, G3, H3, G4, F4 and E5 are amply re-stocked with young babul and kandi, but the former [illegible] by frost. A very fine crop of young babul has been raised by broadcast sowing on the west of compartment E1, but whether it will grow to anything in size is questionable.	Worked for Sukkur *viâ* the river. The forest must depend on the river for its irrigation.
	New Gublo.	8,000—16.	The forest is in seven separate blocks and each block is surrounded by revenue land of one or more of the following dehs:— 1. Bhanar. 2. Kacho Shahgar. 3. Gublo. 4. Khahi Nando Kacha.	A little to the north-east of Daho forest and about 3 miles from the river. The soil varies from a sandy loam to clay with a small proportion of sand. In ordinary years only the low-lying parts on the south come under water.	It is divided into 3 working circles. Blocks 1 to 5 are comprised in Working Circle I. Block 6 and the southern portion of block 7 in Working Circle II; and the remaining northern portion of block 7 in Working Circle III. Working Circle I— Block 1 is nearly pure bahan, with open glades and scattered kandi. Block 2 contains kandi rather poor and scattered on the east, with lai and a little bahan. Block 3 has all three species well represented in it, but the crops on the north is somewhat different. Block 4 is stocked with mixed kandi, bahan and lai, except on the south where nearly unmixed lai occurs. Block 5 has a good mixed growth of kandi and lai everywhere with bahan scattered, except towards the main road on the south where it is rather plentiful. Both kandi and bahan everywhere are pollards which have developed crown shoots and branches since 1895 when the reserve was made. Average density: ·7. Quality: Exploitable, mature bahan is often decayed and hollow. Kandi is somewhat stunted. Pollards due to cutting and lopping for camels and goats. Protection is very bad. Reproduction: The closed coupes are reproduced with coppice. Kandi seedlings are found in block 5 in the vicinity of the Brigg canal, but are not numerous. Babul raised by broadcast sowing has not succeeded. Three acres of tali were started in 1897-98.	

Range.	Forest.	Area.	Boundaries.	Situation, configuration and soil.	Description of stock.	Remarks.
Kashmor.	lo—*contd.*	*contd.*			WORKING CIRCLE II.— Nearly pure lai, mature and immature, everywhere; in fact, at one time under good inundation, it must have formed excellent crops, dense and well grown. The part on the east is mature and decaying in places and quantities of dead lai wood lie in the eastern compartments. Kandi is hardly to be seen, except on the south-east where some pollarded stumps are standing. Protection is not good, the western portion of the forest seems to be well flooded, whilst the eastern part gets hardly any water. A large part of block 7 has been both wholly and partially cleared: the wholly cleared areas are closed for reproduction. This long narrow strip has good mature lai on the south which comes under water, but on advancing towards the north kalar appears with the usual stunted scrub covering it. Some small kandi is also seen scattered in the centre and on the north. Average density: 6. Quality: Exploitable, but indifferent. Reproduction of coppice chiefly. Kandi seedlings are very rare. WORKING CIRCLE III— Here, too, lai is the principal crop, but more kandi is to be seen in this part than in the south. Quantities of dead lai wood cover the ground and immature lai is dying for want of water. Inundation does not extend usually to this part, though the Kashmor band is removed farther to the north. Patches of kalar appear, which are becoming blank. Along the band and in the compartments to the north-east of the Pipli-Sunderani road kandi is well represented, pollards and established seedlings, the latter not appearing to be doing well. Protection is bad. Average density: ·7 Quality: Exploitable, but indifferent in the south. Reproduction: Established kandi seedlings are numerous in some places, especially in the coupes of 1895, but they lack water and sufficient protection. Browsers are admitted against orders.	
	Makhan Belo.*	629·36	Bounded on the north and west by revenue land of deh Makhan Belo; and on the east and south by revenue land of deh Kahi Wadi.	Situated close to and on the east of the last described forests. Soil largely sandy. The forest is inundated in high floods.	A new reserve of 1895. Bahan predominates and mixed with immature lai. Kandi occurs sparingly on the west and about half a dozen mature babul stand on the boundary near Got Mehar Sad. The crops generally are poor from the absence of sufficient irrigation. Blanks are seen and immature lai does not thrive. Average density: ·6. Quality: Poor—hardly fit for exploitation. Reproduction: A little of kandi and a few seedlings of babul are found on the west where the Kalo Dhand overflows. Otherwise, very backward.	The produce is shipped to Sukkur *via* the Kalo Dhand and the river. The forest is on a high level which can only be reached by abnormal floods.

Range.	Forest.	Area.	Boundaries.	Situation, configuration and soil.	Description of stock.	Remarks.
Kashmor.	Badani.	732-24.	Bounded on the north-east and south by revenue land of deh Badani kacha; and on the west by the Kashmor Band and revenue land of deh Badani paka. Two roads from Pipli and old Kahi, respectively, meet on the south-west boundary and then go on to Badani through the forest.	North of the last described forest and about 6 miles from the right bank of the river. Soil as usual. "Kalar" appears as a white efflorescence on the surface. Irrigation depends on the overflow of the Kalo Dhand in high rises of the river.	Kandi and lai are the principal species. Mixed with sar grass and lai, kandi occupies the western half of the forest, and is rarely seen in other parts. Most of the trees are pollards which have developed crown shoots and branches since the forest was reserved in 1895. Lai is not promising, much of it being seen to be dying out for want of water. Kirrar (*capparis aphylla*) and khabar (*salvadora persica*) are to be seen along the eastern boundary. Average density: ·6. Quality: Kandi is exploitable where it occurs. Reproduction: Recent seedlings, rare, established kandi seedlings are fairly numerous, but cannot grow from being browsed upon. On the bank of the Kalo Dhand the surface is high and does not come under water even in high floods.	The produce of the forest is boated to Sukkur *via* the Kalo Dhand and the river.
	Ghander.	2,681-32	Bounded on the north by revenue land of deh Ghander; on the east by revenue lands of deh Ghander and Jhangal Daho; on the south by revenue land of deh Jhangal Daho; and on the west partly by land of Bahawalpur State and partly by land of deh Ghander	About midway between the river and the Kashmor Band at Badani. Soil, a light sandy loam with a substratum of pure sand. The forest depends on the overflow of the river in high floods. The surface level of the forest is too high for ordinary inundation.	Reserved in 1895. In three separate blocks. Bahan pollards are found all over the forest, mixed with immature and indifferent lai. The latter mature and unmixed occupies shallow depressions on the east of compartments B^2 and B^3 and on the north-east of compartment B^4. Elsewhere, it is unirrigated, feeble and dying out in places. The western half of compartment B^1 and the southern and western [illegible] respectively of compartmen[illegible] C^3 are blank, but for scru[illegible]nd ak (*calotropis*) scattered about. Mature babul occurs everywhere scattered; dead and dying trees seen standing are due to want of water and sandy sub soil. Kandi is very insufficiently represented. Average density: ·7. Quality: Bahan and some lai are exploitable; babul, too, where it stands. Reproduction: Compartments B^6, part B^7, B^8, B^9 and B^{10} being felled over and closed. Babul was sown. The plants did well but are now nipped by frost. Kandi seedlings are numerous. Outside of the closed compartments only kandi is seen along the dhoro on the south.	Produce is exported to Sukkur by boat. The dhoro on the southern boundary and on the water channels in the forest might be cleared for better irrigation.
	Gihilpur.	3,962-32.	Bounded on the north by revenue land of deh Bahadurapur; on the east by the river Indus; on the south by revenue land of deh Ghander; and on the west by revenue lands of dehs Nurpur and Gihilpur.	Soil, a light sandy loam with a substratum of almost pure sand. The forest depends on the lateral overflow of the river.	Lai is the prevailing species, but much of the crop is poor and unpromising, and in places is seen to be dying for want of water. The best lai stands in a dense mature crop on the north-east along the bank of the river, where it thrives under regular flooding. Kalar is spread over the surface on high levels where nothing grows. Kandi is found sparingly on the north and a little denser on the south, mixed with lai; but is as a rule very indifferent from frequent lopping by goat herds, probably before the land came under forest. Some nondescript bahan occurs in compartment A^5 on the south of the Kalo dhand. Average density: ·5. Quality: Indifferent, but may be exploited. Reproduction: Good lai coppice is seen in compartments D^3, E^2 and E^3, along the bank of the river. Kandi seedlings are scattered on the bank of the river, the Sindh dhoro, the Nur wah, the Garang dhoro and the Kalo dhand and sparingly elsewhere.	The produce is exported to Sukkur by boat, nothing much can be done to improve the irrigation which must depend on the river. It would be well, though, to clear the channels of the Sind Dhoro, the Nur wah and the smaller Gharos running through the forest at a small cost yearly and to put up a low band on the boundary of compartment 12 up to the bank of the river. The latter would raise the water to a higher level and prevent it from escaping back to the river. Similar bands might be employed in other places where needed.